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ORIGINAL RESEARCH

Assessment of outcome of partial lateral internal sphincterotomy for chronic anal fissure

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Abstract
Background: Lateral internal sphincterotomy (LIS) is the surgical treatment of choice for a chronic anal fissure. The present study was conducted to evaluate outcome of partial lateral internal sphincterotomy for chronic anal fissure.
Materials & Methods:84 patients of anal fissures of both genders were managed with lateral internal sphincterotomy (LIS)performed with the open technique under local anesthesia.
Results: Out of 84 patients, males were 50 and females were 34. Common complaint was pain during defecation in 75, rectal bleeding in 64, perianal discharge in 22, pruritis in 17 and constipation in 43. Pain relief in 1st week was seen in 64, in 2nd week in 70, in 4th week in 76 and in 8th weekin 80. Common complications were perianal abscess in 2, perianal hematoma in 1, rectal bleeding in 3, recurrence in 2 and incontinence in 1 patient. The difference was significant ($P< 0.05$).
Conclusion: There was high healing and patientsatisfaction rates after LIS. Only few complications were observed.
Key words: Anal fissure, lateral internal sphincterotomy, perianal abscess

Introduction

Anal fissure is a common problem that causes substantial morbidity in who are otherwise healthy.[1] Anal fissure is an elongated ulcer in the long axis of lower anal canal. The most frequent site for anal fissure is midline posteriorly followed by midline anteriorly. The disease is more common in men while it is uncommon in children and elderly.[2] It causes severe pain during defecation and rectal bleeding that stains the tissue or streaks the stools. The pathogenesis of chronic anal fissure remains incompletely understood but most are associated with a high resting anal pressure and reduced perfusion at the fissure site due to persistent hypertonia and spasm of the internal anal sphincter.[3]

Lateral internal sphincterotomy (LIS) is the surgical treatment of choice for a chronic anal fissure. Optimal division of the lateral internal sphincter has not yet been devised since the length of the anal canal differs between patients.[4] It is appropriate to describe it according to the position of the dentate line (i.e., division of the internal anal sphincter below the dentate line). Lateral internal sphincterotomy heals chronic anal fissure in over 90% of cases.[5]The

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present study was conducted to evaluate outcome of partial lateral internal sphincterotomy for chronic anal fissure.

Materials & Methods

The present study comprised of 84 patients of anal fissures of both genders. All gave their written consent for the participation in the study.

Data such as name, age, gender etc. was recorded. A thorough clinical examination was carried out. LIS was performed in all patients with the open technique under local anesthesia. In the prone jackknife position with the buttocks taped apart, a small (1 cm) incision was created on the anal verge. The anal subepithelial and intersphincteric spaces were delineated with blunt dissection. LIS was performed to the level of the dentate line. Hemostasis was checked and the operation terminated. The patients were discharged on the same day. Sitz baths after each bowel movement were suggested for oneweek post-treatment.Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total- 84		
Gender	**Males**	**Females**
Number	50	34

Table I shows that out of 84 patients, males were 50 and females were 34.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Complaints	Pain during defecation	75	0.05
	Rectal bleeding	64	
	Perianal discharge	22	
	Pruritis	17	
	Constipation	43	
Pain relief	1^{st} week	64	0.12
	2^{nd} week	70	
	4^{th} week	76	
	8^{th} week	80	

Table II, graph I shows that common complaint was pain during defecation in 75, rectal bleeding in 64, perianal discharge in 22, pruritis in 17 and constipation in 43. Pain relief in 1st week was seen in 64, in 2nd week in 70, in 4th week in 76 and in 8th week in 80. The difference was significant (P< 0.05).

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Graph I Assessment of parameters

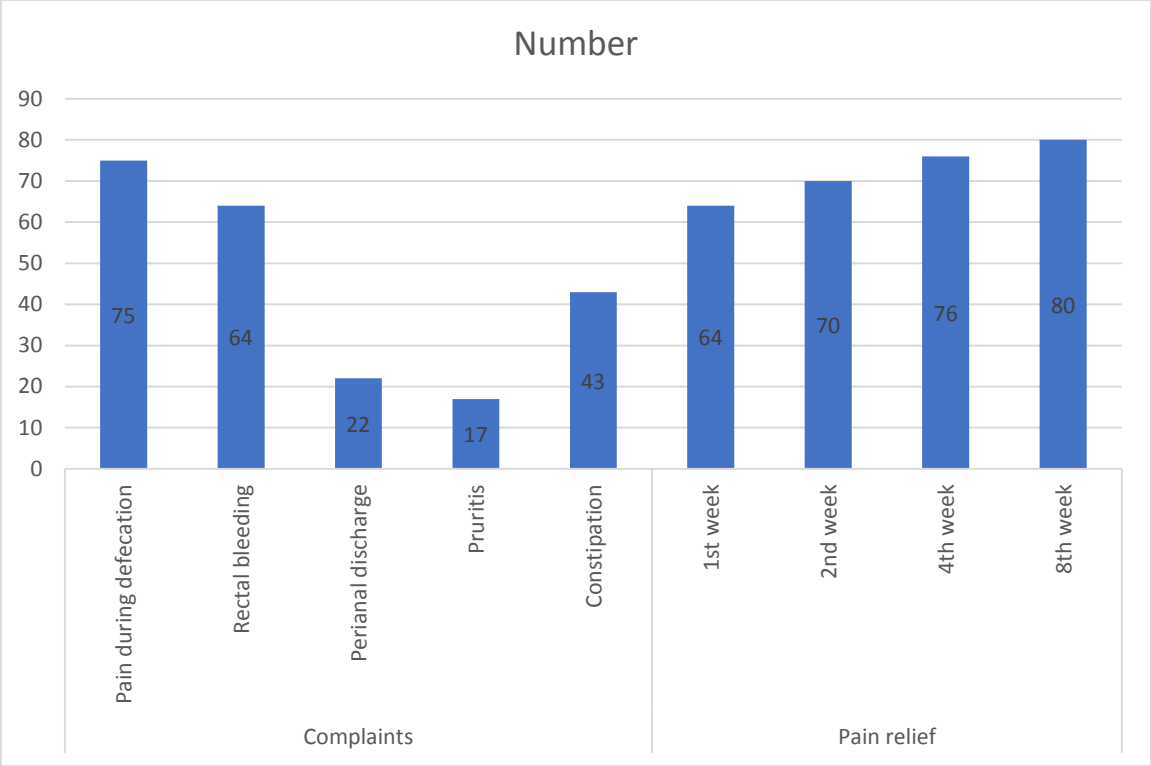

Table III Post- operative complications

Complications	Number	P value
Perianal abscess	2	0.05
Perianal hematoma	1	
Rectal bleeding	3	
Recurrence	2	
Incontinence	1	

Table III shows that common complications were perianal abscess in 2, perianal hematoma in 1, rectal bleeding in 3, recurrence in 2 and incontinence in 1 patient. The difference was significant (P< 0.05).

Discussion

A chronic anal fissure is a non-healing tear of distal anal mucosa below the dentate line. It was reported that 10% of the visits to the colorectal clinical units are for anal fissure and it is more frequent between 20-39 years of age. It usually occurs because of factors such as constipation, diarrhea and surgery all of which cause trauma at the anal canal. The tear occurring at anoderm triggers spasm at the internal anal sphincter.[6] This spasm, in turn, causes pain and further tears and decreases the blood supply of anoderm. This pain, spasm and ischemia vicious cycle may lead to a nonhealing chronic anal fissures. Fissures lasting more than four weeks tend to become chronic. Induration within the margins of the fissure, presence of internal sphincter fibers at the base, presence of sentinel polyp, or fibro-epithelial polyp is findings in favour of fissure chronicity.[7]

Lateral internal sphincterotomy (LIS) with a 92-100% healing rate is considered as the golden standard. LIS is described as open closed, complete-incomplete, depending on the discretion of the surgeon and patient preference. Besides, surgical methods such as fissurectomy and advancement flaps with various methods are also described.[8] Although very high healing rates were reported for the LIS, the most important complications of the

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procedure are permanent or transient incontinence and recurrence. Partial internal sphincterotomy (tailored) is described with lower incontinence and a similar healing rate. In lower anal tonus, fissurectomy and flap, method is recommended rather than LIS.9The present study evaluated outcome of partial lateral internal sphincterotomy for chronic anal fissure.

We found that out of 84 patients, males were 50 and females were 34. Mentes et al[10]investigated the effects of lateral internal sphincterotomy on quality of life in patients with chronic anal fissure using the Gastrointestinal Quality of Life Index and the Fecal Incontinence Quality of Life Scale.Adult patients with chronic anal fissure underwent lateral internal sphincterotomy with the open technique. Two hundred forty-four patients completed the Gastrointestinal Quality of Life Index questionnaire at admission and at 12 months postoperatively. The mean preoperative Gastrointestinal Quality of Life Index score was 118.34 +/- 6.33, which developed to 140.74 +/- 2.38 postoperatively (P< 0.001). At the two-month follow-up, 18 patients (7.38 percent) had a Fecal Incontinence Severity Index score greater than 0. By 12 months, the number of patients with Fecal Incontinence Severity Index score greater than 0 was reduced to seven (2.87 percent). These seven patients had a Gastrointestinal Quality of Life Index score similar to that of the group with postoperative Fecal Incontinence Severity Index score of 0, and only three patients (1.22 percent) had evident deterioration in the Fecal Incontinence Quality of Life Scale. The 12-month total Gastrointestinal Quality of Life Index score of the three patients who developed anal abscess/fistula after sphincterotomy (139.33 +/- 3.21) was similar to the Gastrointestinal Quality of Life Index score of those without complications. However, the Gastrointestinal Quality of Life Index score of the recurrent cases (111.53 +/- 3.53) was apparently low.

We found that common complaint was pain during defecation in 75, rectal bleeding in 64, perianal discharge in 22, pruritis in 17 and constipation in 43. Pain relief in 1st week was seen in 64, in 2nd week in 70, in 4th week in 76 and in 8th week in 80. Rosa et al[11]in their study 388 patients underwent ILS procedure (197 men, 191 women) with a median age of 43 years (range, 18-80). Postoperative complications consisted of abscess in 4 patients (1.0%), hemorrhage in 2 patients (0.5%), and pain in 6 patients (1.5%). Follow-up data are available for 261 patients (67.3%). Two months after surgery, 9 patients (3.4%) complained of persistent or recurring pain with or without fissure and 1 (0.4%) complained of gas incontinence. At postoperative manometry, 12 patients (4.6%) revealed persistence of anal resting pressure over 40 mm Hg, 9 patients (3.4%) were still symptomatic and 97.6% were cured at a median follow-up of 8 months. An anal resting pressure lower than 30 mmHg was found in 10 patients (3.8%), only one of whom was incontinent.

We found that common complications were perianal abscess in 2, perianal hematoma in 1, rectal bleeding in 3, recurrence in 2 and incontinence in 1 patient. Araujo et al[12] performed a prospective clinical trial with 190 patients in three groups comparing medical treatment (n: 128) vs. LIS (n: 62) and reported pain relief rates of 100% for LIS after eighth week (93% in two weeks and 100% at the end of the eighth week).

The limitation the study is small sample size.

Conclusion

Authors found that there was high healing and patientsatisfaction rates after LIS. Only few complications were observed.

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